

ABSTRACT OF THE DISCLOSURE

It is an object of the present invention to provide a method for recording data in an optical recording medium which can record data in a write-once type optical recording medium at a high linear recording velocity using a laser beam having a low recording power.

The method for recording data in an optical recording medium according to the present invention is constituted so that when data are to be recorded in an optical recording medium including a substrate, a first recording layer and a second recording layer by projecting a laser beam whose power is modulated in accordance with a pulse train pattern including pulses whose levels are set to levels corresponding to a recording power P_w and a bottom power P_b onto the optical recording medium and forming a recording mark at a predetermined region of the first recording layer and the second recording layer, as a linear recording velocity increases, the power of the laser beam is modulated using a pulse train pattern including a smaller number of pulses whose level is set to a level to the recording power P_w , thereby forming a recording mark.

According to the present invention, since the power of a laser beam is modulated using a pulse train pattern including a smaller number of pulses whose level is set to a level to the recording power P_w as a linear recording velocity increases, it is possible to record data in an optical recording medium using a laser beam having a low recording power even when a linear recording velocity is high and on the other hand, it is possible to prevent cross-talk of data from increasing even when a linear recording velocity is low. Therefore, it is possible to employ a semiconductor laser having a relatively low output even when data are recorded at a high linear recording velocity.

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(54) 発明の名称: 光記録媒体へのデータの記録方法、光記録媒体へのデータの記録装置および光記録媒体

E
パルス数

		2T	3T	4T	5T	6T	7T	8T
A 記録線速度 ↓ D	低(VL)	1	2	3	4	5	6	7
	B	1	1	2	2-3	2-4	2-5	2-6
		1	1	1	2	2-3	2-4	2-5
	中(VM)	1	1	1	1	2	2-3	2-4
	C	1	1	1	1	1	2	2-3
		1	1	1	1	1	1	2
	高(VH)	1	1	1	1	1	1	1

A...RECORDING LINEAR VELOCITY
B...LOW (VL)
C...MIDDLE (VM)

D...HIGH (VH)
E...NUMBER OF PULSES

(57) Abstract: A method for recording data to an optical recording medium capable of recording data onto a write once optical recording medium with a high recording linear velocity by using a laser beam of a low recording power. As the data recording linear velocity increases, a pulse string pattern having a smaller number of pulses of recording power is used to modulate the laser beam power. Even when the data recording linear speed is high, it is possible to record data by using a laser beam of a low recording power. On the other hand, when the recording linear velocity is low, it is possible to suppress cross talk. Even when the data recording linear velocity is high, it is possible to use a semiconductor laser of comparatively low output.

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